

(19) World Intellectual Property
Organization
International Bureau



533 070

(43) International Publication Date
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number
WO 2004/039328 A2

- (51) International Patent Classification⁷: **A61K**
- (21) International Application Number:
PCT/US2003/034591
- (22) International Filing Date: 29 October 2003 (29.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/422,470 29 October 2002 (29.10.2002) US
- (71) Applicant (for all designated States except US): **ORE-GON HEALTH & SCIENCE UNIVERSITY [US/US]**;
Office of Technology & Research Collaborations, 2525 SW
First Avenue, Suite #120, Portland, OR 97201 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **TRUNE, Dennis, R.**
[US/US]; 11075 SW Cottonwood Lane, Tigard, OR 97223-
4221 (US).
- (74) Agent: **RYBAK, Sheree, Lynn**; Klarquist, Sparkman,
LLP, One World Trade Center, Suite 1600, 121 SW Salmon
Street, Portland, OR 97204 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:**
— of inventorship (Rule 4.17(iv)) for US only
- Published:**
— without international search report and to be republished
upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: **FLUDROCORTISONE TREATMENT FOR HEARING LOSS**

(57) Abstract: Methods and compositions for treating or stabilizing hearing loss due to cochlear disorders by administration of compositions that include fludrocortisone or a mimetic or analog thereof are disclosed.



WO 2004/039328 A2

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



10/533070



(43) International Publication Date
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number
WO 2004/039328 A3

(51) International Patent Classification⁷: **A61F 2/00**

(21) International Application Number:
PCT/US2003/034591

(22) International Filing Date: 29 October 2003 (29.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/422,470 29 October 2002 (29.10.2002) US

(71) Applicant (for all designated States except US): **ORE-GON HEALTH & SCIENCE UNIVERSITY [US/US]**;
Office of Technology & Research Collaborations, 2525 SW
First Avenue, Suite #120, Portland, OR 97201 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **TRUNE, Dennis, R.**
[US/US]; 11075 SW Cottonwood Lane, Tigard, OR 97223-
4221 (US).

(74) Agent: **RYBAK, Sheree, Lynn**; Klarquist, Sparkman,
LLP, One World Trade Center, Suite 1600, 121 SW Salmon
Street, Portland, OR 97204 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

— before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:

15 July 2004

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: **FLUDROCORTISONE TREATMENT FOR HEARING LOSS**

(57) Abstract: Methods and compositions for treating or stabilizing hearing loss due to cochlear disorders by administration of compositions that include fludrocortisone or a mimetic or analog thereof are disclosed.

WO 2004/039328 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/34591

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61F 2/00
US CL : 424/400, 422, 427, 451, 464, 489

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/400, 422, 427, 451, 464, 489

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
USPatents, USPG-Pub, Derwent, EPO, JPO

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 2003/0040509 A1 (MOSKOWITZ) 27 February 2003 (27.02.2003), entire document.	1-27

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

04 March 2004 (04.03.2004)

Date of mailing of the international search report

27 MAY 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Charesse L. Evans

Telephone No. 571-272-1600